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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/805,567	03/14/2001	Kazuaki Tomita	058856/0104	1337

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WASHINGTON, DC 20007

EXAMINER

DANG, KHANH NMN

ART UNIT	PAPER NUMBER
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2181

DATE MAILED: 03/03/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/805,567

Applicant(s)

TOMITA, KAZUAKI

Examiner

Khanh Dang

Art Unit

2181

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-5 are directed to an apparatus. However, the essential structural cooperative relationships between elements recited in the claims have been omitted, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Hayashi.

At the outset, it is first noted that similar claims will be grouped together to avoid repetition in explanation.

As broadly drafted, these claims do not define any structure that differs from Hayashi. With regard to claim 1, Hayashi discloses a programmable controller which executes a user program process, an I/O refresh process and a peripheral service process by using a same microprocessor, comprising: normal process means (2a, for

example) for cyclically executing the user program process and I/O refresh process (note that every programmable controller has an I/O refresh process which is for replacing/updating the content of corresponding input data of an I/O memory with another input data) according to a normal procedure; interruption trigger generating means (OR circuit 7, for example) for generating an interruption trigger at a prescribed interval; and interruption process means (interruption routine as in Hayashi) for interrupting the user program process by the normal process means and executing the peripheral service process by a prescribed amount (periodically as in Hayashi) according to an interruption procedure (interruption routine) every time an interruption trigger is generated. With regard to claims 2 and 3, it is clear from Hayashi that the "interval" or period or predetermined time can be set or changed (see at least shown in Fig. 2 and description thereof, particularly the interruption resetting operation). With regard to claim 4, see at least column 3, lines 8-36 of Hayashi. With regard to claim 5, it is clear from Hayashi that the so-called "prescribed interval" or interruption period is the time it takes to finish the peripheral service process plus a predetermined time for another interruption operation. With regard to claim 6, it is clear that in addition to 2a, 7, and interruption routine, one can select the so-called "first mode" and a "second mode" through at least through FF 6, control input/output 8, 9. See also explanation regarding claim 1.

Claims 1-3, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Yonezawa et al.

At the outset, it is first noted that similar claims will be grouped together to avoid repetition in explanation.

As broadly drafted, these claims do not define any structure that differs from Yonezawa et al. With regard to claims 1 and 6, Yonezawa et al. discloses a programmable controller which executes a user program process, an I/O refresh process and a peripheral service process by using a same microprocessor, comprising: normal process means (CPU Board 100, for example) for cyclically executing the user program process and I/O refresh process (see at least Fig. 29 and description thereof) according to a normal procedure; interruption trigger generating means (interrupt generator 24, for example) for generating an interruption trigger at a prescribed interval; and interruption process means (interruption request service process) for interrupting the user program process by the normal process means and executing the peripheral service process by a prescribed amount (can be set by a timer as in Yonezawa et al.) according to an interruption procedure (interruption routine) every time an interruption trigger is generated. With regard to claims 2 and 3, it is clear from Yonezawa et al. that the "interval" or predetermined time can be set or changed by a "timer." With regard to claim 5, it is clear from Yonezawa et al. that the so-called "prescribed interval" or interruption period is the time it takes to finish the peripheral service process plus a predetermined time for another interruption operation.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Flood et al.

At the outset, it is first noted that similar claims will be grouped together to avoid repetition in explanation.

As broadly drafted, these claims do not define any structure that differs from Flood et al. With regard to claims 1, 4, and 6, Flood et al. discloses a programmable controller which executes a user program process, an I/O refresh process and a peripheral service process by using a same microprocessor, comprising: normal process means (system controller 16, for example) for cyclically executing the user program process and I/O refresh process (see at least Fig. 2 and description thereof) according to a normal procedure; interruption trigger generating means (selectable time interrupt STI, for example) for generating an interruption trigger at a prescribed interval (selectable time); and interruption process means (interrupt routine) for interrupting the user program process by the normal process means and executing the peripheral service process by a prescribed amount (selectable time as in Flood et al.) according to an interruption procedure (interrupt routine) every time an interruption trigger is generated. With regard to claims 2 and 3, it is clear from Flood et al. that the "interval" or selectable time can be selected or changed. With regard to claim 5, it is clear from Flood et al. that the so-called "prescribed interval" or selectable time is the time it takes to finish the peripheral service process plus a predetermined time for another interruption operation.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Flood et al.

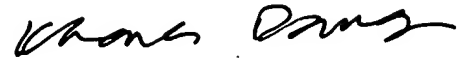
At the outset, it is first noted that similar claims will be grouped together to avoid repetition in explanation.

As broadly drafted, these claims do not define any structure that differs from Schultz et al. With regard to claims 1 and 6, Schultz et al. discloses a programmable controller which executes a user program process, an I/O refresh process and a peripheral service process by using a same microprocessor, comprising: normal process means (26) for cyclically executing the user program process and I/O refresh process (see at least Fig. 2 and description thereof) according to a normal procedure; interruption trigger generating means (27, for example) for generating an interruption trigger at a prescribed interval (interrupt interval); and interruption process means (interrupter routines) for interrupting the user program process by the normal process means and executing the peripheral service process by a prescribed amount (interrupt interval as in Schultz et al.) according to an interruption procedure (interrupter routine) every time an interruption trigger is generated. With regard to claims 2 and 3, it is clear from Schultz et al. that the "interval" or interrupt interval can be set/reset or changed. With regard to claim 4, see at least col. 10, line 56 to col. 11, line 20. With regard to claim 5, it is clear from Schultz et al. that the so-called "prescribed interval" or selectable time is the time it takes to finish the peripheral service process plus a predetermined time for another interruption operation.

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Any inquiry concerning this communication should be directed to Khanh Dang at telephone number 703-308-0211.

A handwritten signature in black ink, appearing to read "Khanh Dang", written in a cursive style.

Khanh Dang
Primary Examiner